

LPDES PERMIT NO. LA0041025, AI No. 3063

LPDES FACT SHEET and RATIONALE  
FOR THE DRAFT LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM  
(LPDES) PERMIT TO DISCHARGE TO WATERS OF LOUISIANA

- I. Company/Facility Name: CertainTeed Corporation  
P.O. Box 1189  
Sulphur, Louisiana 70664
- II. Issuing Office: Louisiana Department of Environmental Quality  
(LDEQ)  
Office of Environmental Services  
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- III. Prepared By: Jenniffer Sheppard  
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Date Prepared: January 22, 2009

IV. Permit Action/Status:

A. Reason For Permit Action:

Proposed reissuance of an Louisiana Pollutant Discharge Elimination System (LPDES) permit for a 5-year term following regulations promulgated at LAC 33:IX.2711/40 CFR 122.46\*.

LAC 33:IX Citations: Unless otherwise stated, citations to LAC 33:IX refer to promulgated regulations listed at Louisiana Administrative Code, Title 33, Part IX.

40 CFR Citations: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations in accordance with the dates specified at LAC 33:IX.2301, 4901, and 4903.

- B. NPDES permit - NPDES permit effective date: NA  
NPDES permit expiration date: NA  
EPA has not retained enforcement authority.
- C. LPDES permit - LPDES permit effective date: September 1, 2002.  
LPDES permit expiration date: August 31, 2007.
- D. Application received on March 12, 2007. Additional Information received on March 12, 2008 (application replaced the March 12, 2007 submittal) and April 9, 2009.

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V. Facility Information:

A. Location - 3300 Pete Manena Road in Sulphur

B. Applicant Activity -

According to the application, CertainTeed Corporation, is a plastics and synthetic material facility that manufactures polyvinyl chloride (PVC) polymer.

PVC is carried out in a batch process with a patented dry bulk polymerization process from Atochem of Paris, France. Vinyl chloride monomer is polymerized in a two step reaction utilizing a prepolymerizer and an autoclave.

A neighboring facility, PPG Industries (LA0000761), has proposed to remediate the lower PPG Canal (a.k.a. PPG Silicas Ditch) and portions of Bayou D'Inde. As a result of the remediation activities, PPG Industries relocated their Outfall 001 from Bayou D'Inde to the Calcasieu River in March 2009. This is pertinent to CertainTeed Corporation since all wastewaters from this facility are discharged into the PPG Canal for discharge directly to the Calcasieu River.

Please Note: CertainTeed's LPDES permit renewal application and additional information documents reference the following discharge location: PPG Silica Pigments Ditch, thence to Bayou D'Inde. However, since PPG Industries has already moved their discharge to the Calcasieu River, the proposed permit and Fact Sheet references the new location at all outfalls.

C. Technology Basis - (40 CFR Chapter 1, Subchapter N/Parts 401, 405-415, and 417-471 have been adopted by reference at LAC 33:IX.4903)

Guideline

Organic Chemicals, Plastics,  
and Synthetic Fibers

Reference

40 CFR 414, Subparts D and J

Process Flow - 0.50688 MGD

Other sources of technology based limits:

LDEQ Stormwater Guidance, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6).

Louisiana Water Quality Management Plan for Sanitary Dischargers.

LDEQ Sanitary General Permits.

Best Professional Judgment.

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D. Fee Rate -

1. Fee Rating Facility Type: major
2. Complexity Type: VI
3. Wastewater Type: II
4. SIC code: 2821

E. Continuous Facility Effluent Flow - 4.65552 MGD.

VI. Receiving Waters: PPG Silica Pigments Ditch, thence to the Calcasieu River

1. TSS (15%), mg/L: 10.5
2. Average Hardness, mg/L  $\text{CaCO}_3$ : 400
3. Critical Flow, cfs: 1609
4. Mixing Zone Fraction: 0.33333
5. Harmonic Mean Flow, cfs: 4828
6. River Basin: Calcasieu River, Segment No. 030301
7. Designated Uses:

The designated uses are primary contact recreation, secondary contact recreation, and fish and wildlife propagation.

Information based on the following: LAC 33:IX Chapter 11. Hardness and 15% TSS data come from ambient site 94 (Bayou D'Inde near Lake Charles at the confluence of Bayou D'Inde and the Calcasieu Ship Channel, 1.0 miles northwest of Lock Point) listed in Hardness and TSS Data for All LDEQ Ambient Stations for the Period of Record as of March 1998, LeBlanc. This information was included in a memorandum from Todd Franklin to Jenniffer Sheppard dated January 5, 2009 (See Appendix C).

VII. Outfall Information:

Outfall 001

- A. Type of wastewater - the continuous discharge of process wastewater and process area stormwater from the thermal oxidizers, process drains, and railcar sumps; utility wastewater including cooling tower blowdown, boiler blowdown, conveyor blower air cooling water, and air compressor condensate drain wastewater; non process area stormwater; water well overflow; and sanitary wastewater from Internal Outfall 101.
- B. Location - at the V-notch weir discharge located at the southeast corner of CertainTeed's property, at a point downstream of the junction of the East Ditch and the West Ditch and prior to the commingled stream leaving CertainTeed's property, at Latitude 30°13'30", Longitude 93°17'50".

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- C. Treatment - treatment of thermal oxidizer wastewater:  
     - neutralization

All other wastewaters - none.

- D. Flow - Continuous Flow 4.65552 MGD.

Process Wastewater*	0.50688 MGD
Utility Wastewater*	0.30672 MGD
Sanitary Wastewater*	0.00720 MGD
Miscellaneous Wastewater*	3.83472 MGD

\* Specific component waste streams are defined at Appendix A-1.

- E. Receiving waters - PPG Silica Pigments Ditch, thence to the Calcasieu River.
- F. Basin and segment - Calcasieu River Basin, Segment 030301.

Internal Outfall 101

- A. Type of wastewater - the intermittent discharge of treated sanitary wastewater.
- B. Location - at the point of discharge from the sanitation unit prior to commingling with any other wastewater flows, at Latitude 30°13'36", Longitude 93°17'52".
- C. Treatment - treatment of sanitary wastewaters consists of:  
     - sanitation unit
- D. Flow - Intermittent, (Estimated) 0.0072 MGD.
- E. Receiving waters - Final Outfall 001, thence to the PPG Silica Pigments Ditch and the Calcasieu River.
- F. Basin and segment - Calcasieu River Basin, Segment 030301.

Outfall 003

- A. Type of wastewater - the intermittent discharge of low contamination potential stormwater runoff.
- B. Location - at the point where an unnamed Parish road drainage ditch passes near the northeast corner of CertainTeed Corporation's property, at Latitude 30°13'45", Longitude 93°17'50".
- C. Treatment - None.

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- D. Flow - Intermittent.
- E. Receiving waters - PPG Silica Pigments Ditch, thence to the Calcasieu River.
- F. Basin and segment - Calcasieu River Basin, Segment 030301.

VIII. Proposed Permit Limits:

The specific effluent limitations and/or conditions will be found in the draft permit. Development and calculation of permit limits are detailed in the Permit Limit Rationale section below.

Summary of Proposed Changes From the Current LPDES Permit:

- A. A neighboring facility, PPG Industries (LA0000761), has proposed to remediate the lower PPG Canal (a.k.a. PPG Silicas Ditch) and portions of Bayou D'Inde. As a result of the remediation activities, PPG Industries relocated their Outfall 001 from Bayou D'Inde to the Calcasieu River in March 2009. This is pertinent to CertainTeed Corporation since all wastewaters from this facility are discharged into the PPG Canal for discharge directly to the Calcasieu River. Therefore, the Subsegment for this facility has changed from 030901 to 030301.
- B. Outfall 001 - Limitations were calculated in accordance with the OCPSP Guideline concentrations at 40 CFR Part 414, with 100% of the production covered under Subpart D. This renewal reflects a decrease in process flow from the current LPDES permit, effective on September 1, 2002 from 0.51048 MGD to 0.50688 MGD. However, the outfall has an overall increase in flow from 1.96848 MGD to 4.65552 MGD. The overall increase in flow was due to increased flows of conveyor blower air cooling water and the addition of air compressor condensate. Additionally, the Fact Sheet accompanying the current LPDES permit, effective on September 1, 2002 erroneously listed the total non-process area stormwater flow rate as 500 GPM (or 0.72 MGD) when the previous application identified a flow rate of 2363 GPM (or 3.40272 MGD). This value has been corrected in the renewed LPDES permit. The increase in flow contributes to higher BOD<sub>5</sub> and TSS limitations being established at this outfall.
- C. Outfall 001 - A Total Maximum Daily Load (TMDL) has been developed for the Upper Calcasieu Estuary (subsegment 030301), which recommends that all major and significant minor dischargers test effluents for chronic toxicity at least quarterly to demonstrate that unmonitored pollutants or the combination of monitored and/or unmonitored pollutants are not causing instream toxicity. Therefore, whole effluent toxicity testing requirements have been established at this outfall. This recommendation is in accordance with the

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LDEQ/OES Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, Water Quality Management Plan, Volume 3, Version 6 (April 16, 2008), and the Best Professional Judgment (BPJ) of the reviewer.

- D. Outfall 001 - the monitoring frequency for Hexachlorobenzene has been increased from 1/year to 1/quarter due to an EPA, Region VI recommendation for quarterly monitoring (at a minimum) on all water quality based effluent limitations.
- E. Outfall 001 - Daily maximum loadings have been added to this outfall for Total Copper and Total Mercury as per the Upper Calcasieu Estuary TMDL, issued in the Federal Register on June 13, 2002. A monitoring frequency of 1/quarter has been established based on the sampling requirements also established in the TMDL. The loadings assigned to the previous discharge location into Bayou D'Inde under Subsegment (030901) were applied to the new discharge location in the Calcasieu River under Subsegment (030301) based on Best Professional Judgment (BPJ).

Use of the waste load allocations (WLAs) for Total Copper and Total Mercury from the Bayou D'Inde TMDL is appropriate based on the following items:

1. CertainTeed Corporation discharges through the PPG Industries Canal. Until the move of the discharge location in March 2009, PPG was historically the last facility contributing wastewaters to Bayou D'Inde prior to mixing with the waters of the Calcasieu River, about 1,200 feet downstream.
2. The WLAs used in the Bayou D'Inde TMDL were included in the overall model of the Upper Calcasieu Estuary TMDL for Subsegment 030301.

Based on both factors listed above, the LDEQ has determined the proximity of the new PPG Canal discharge location is similar to the location used during TMDL development. Therefore, the overall loadings of Total Copper and Total Mercury in the Calcasieu River are not reasonably expected to change.

- F. Outfall 001 - monthly average and daily maximum limitations for Benzo(a)anthracene and Benzo(a)pyrene were established in the current LPDES permit, effective on September 1, 2002 due to the OCPSF Guidelines at 40 CFR 414, Subpart J.

These parameters were also identified in the Upper Calcasieu Estuary TMDL, issued in the Federal Register on June 13, 2002, as pollutants of concern for Subsegment 030301. Since CertainTeed Corporation was not assigned TMDL allocations due to their previous discharge

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location into Bayou D'Inde under Subsegment (030901), LDEQ has determined that it is appropriate to utilize a portion of the Margin of Safety (MOS) for the new discharge location into the Calcasieu River under Subsegment (030301). The current MOS for these parameters is 0.2375 lbs/day. The MOS listed in the TMDL was 0.475 lbs/day, but 50% of the MOS was previously assigned to PPG Industries under LA0000761 to accommodate the remediation of Bayou D'Inde and ultimate canal reroute to the Calcasieu River, leaving 0.2375 lbs/day remaining for other facilities/future growth. Calculation of technology based effluent limitations for these parameters yields monthly average limitations of 0.08 lbs/day, which is well below the existing MOS loadings. Therefore, LDEQ has established monthly average limitations of 0.08 lbs/day for Benzo(a)anthracene and Benzo(a)pyrene leaving 0.1575 lbs/day in the MOS for other facilities and/or future growth. This determination was based on Best Professional Judgment (BPJ).

- G. Outfall 001 - To demonstrate compliance with the waste load allocations (WLAs) established in the Calcasieu TMDL for Toxics and to protect against the potential for discharges of the TMDL pollutants (Total Copper, Total Mercury, Benzo(a)anthracene, and Benzo(a)pyrene) at levels above state water quality standards, site specific MQL's were developed.
- H. Internal Outfall 101 - A flow reporting requirement has been established at this outfall in accordance with LAC 33:IX.2707.I.1.b.
- I. Internal Outfall 101 - the monitoring frequency for Fecal Coliform has been increased from 2/month to 1/week based on multiple excursions reported from December 2007 through January 2009.

IX. Permit Limit Rationale:

The following section sets forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. Also set forth are any calculations or other explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under LAC 33:IX.2707/40 CFR Part 122.44 and reasons why they are applicable or an explanation of how the alternate effluent limitations were developed.

A. TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Following regulations promulgated at LAC 33:IX.2707.L.2.b/40 CFR Part 122.44(1)(2)(ii), the draft permit limits are based on either technology-based effluent limits pursuant to LAC 33:IX.2707.A/40 CFR Part 122.44(a) or on State water quality standards and requirements

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pursuant to LAC 33:IX.2707.D/40 CFR Part 122.44(d), whichever are more stringent.

B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS, CONDITIONS, AND MONITORING REQUIREMENTS

Regulations promulgated at LAC 33:IX.2707.A/40 CFR Part 122.44(a) require technology-based effluent limitations to be placed in LPDES permits based on effluent limitations guidelines where applicable, on BPJ (best professional judgment) in the absence of guidelines, or on a combination of the two. The following is a rationale for types of wastewaters. See outfall information descriptions for associated outfall(s) in Section VII. Regulations also require permits to establish monitoring requirements to yield data representative of the monitored activity [LAC 33:IX.2715/40 CFR 122.48(b)] and to assure compliance with permit limitations [LAC 33:IX.2707.I./40 CFR 122.44(I)].

1. Outfall 001 - Process Wastewaters

\*Outfall 001 - the continuous discharge of process wastewater and process area stormwater from the thermal oxidizers, process drains, and railcar sumps; utility wastewater including cooling tower blowdown, boiler blowdown, conveyor blower air cooling water, and air compressor condensate drain wastewater; non process area stormwater; water well overflow; and sanitary wastewater from Internal Outfall 101.

CertainTeed Corporation is subject to Best Practicable Control Technology Currently Available (BPT) and Best Available Technology Economically Achievable (BAT) effluent limitation guidelines listed below:

<u>Manufacturing Operation</u>	<u>Guideline</u>
Organic chemical manufacturing	40 CFR 414, Subpart(s) D and J

Subpart D = Thermoplastic Resins makes up 100% of the production at CertainTeed Corporation.

Subpart J = Direct Discharge Point Sources That Do Not Use End-Of-Pipe Biological Treatment.

The following wastestreams and flows were used in limitation calculation:



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<u>Process</u>	<u>Flow, MGD</u>	<u>GPM</u>
Thermal Oxidizer WW	0.49680	345
Railcar Sump WW	0.00288	2
<u>Process Drains WW</u>	<u>0.00720</u>	<u>5</u>
Total Process	0.50688	352
<u>Sanitary</u>		
Sanitary WW Total	0.00720	5
<u>Miscellaneous</u>		
Water Well Overflow	0.43200	300
<u>Non-Process Area SW</u>	<u>3.40272</u>	<u>2363</u>
Total Miscellaneous	3.83472	2663
<u>Utility</u>		
Cooling Tower Blowdown	0.27648	192
Boiler Blowdown	0.02160	15
Conveyor Blower Air Cooling	0.00288	2
<u>Air Compressor Condensate</u>	<u>0.00576</u>	<u>4</u>
Total Utility	0.30672	213
Total Outfall Flow	4.65552	3233

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Flow, MGD	Report	Report			Continuous
pH (Standard Units)	---	---	6.0 (Min)	9.0 (Max)	1/week
BOD <sub>5</sub>	186	494	---	---	1/month
TSS	1460	4743	---	---	1/week
Total Copper(*)	---	0.08000	---	---	1/quarter
Total Mercury(*)	---	0.00055	---	---	1/quarter
Benzo(a)anthracene	0.08	---	---	---	1/quarter
Benzo(a)pyrene	0.08	---	---	---	1/quarter
Acrylonitrile	0.40	0.98	---	---	1/year
Benzene	0.24	0.57	---	---	1/year

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PARAMETER (S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Carbon Tetrachloride	0.60	1.61	---	---	1/year
Chlorobenzene	0.60	1.61	---	---	1/year
Chloroethane	0.47	1.25	---	---	1/year
Chloroform	0.47	1.37	---	---	1/year
1,1-Dichloroethane	0.09	0.25	---	---	1/year
1,2-Dichloroethane	0.76	2.43	---	---	1/year
1,1-Dichloroethylene	0.09	0.25	---	---	1/year
1,2-trans-Dichloroethylene	0.11	0.28	---	---	1/year
1,2-Dichloropropane	0.83	3.36	---	---	1/year
1,3-Dichloropropylene	0.83	3.36	---	---	1/year
Ethylbenzene	0.60	1.61	---	---	1/year
Methyl Chloride	0.47	1.25	---	---	1/year
Methylene Chloride	0.15	0.72	---	---	1/year
Tetrachloroethylene	0.22	0.69	---	---	1/year
Toluene	0.12	0.31	---	---	1/year
1,1,1-Trichloroethane	0.09	0.25	---	---	1/year
1,1,2-Trichloroethane	0.14	0.54	---	---	1/year
Trichloroethylene	0.11	0.29	---	---	1/year
Vinyl Chloride	0.41	0.73	---	---	1/quarter
2,4-Dimethylphenol	0.08	0.20	---	---	1/year
4,6-Dinitro-o-cresol	0.33	1.17	---	---	1/year
2,4-Dinitrophenol	5.10	18.14	---	---	1/year
2-Nitrophenol	0.27	0.98	---	---	1/year
4-Nitrophenol	0.68	2.43	---	---	1/year

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PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Phenol	0.08	0.20	---	---	1/year
Acenaphthene	0.08	0.20	---	---	1/year
Acenaphthylene	0.08	0.20	---	---	1/year
Anthracene	0.08	0.20	---	---	1/year
3,4-Benzofluoranthene	0.08	0.20	---	---	1/year
Benzo(k)fluoranthene	0.08	0.20	---	---	1/year
Bis(2-ethylhexyl)phthalate	0.40	1.09	---	---	1/year
Chrysene	0.08	0.20	---	---	1/year
1,2-Dichlorobenzene	0.83	3.36	---	---	1/year
1,3-Dichlorobenzene	0.60	1.61	---	---	1/year
1,4-Dichlorobenzene	0.60	1.61	---	---	1/year
Diethyl phthalate	0.19	0.48	---	---	1/year
Dimethyl phthalate	0.08	0.20	---	---	1/year
Di-n-butyl phthalate	0.08	0.18	---	---	1/year
Fluoranthene	0.09	0.23	---	---	1/year
Fluorene	0.08	0.20	---	---	1/year
Hexachlorobenzene (*)	0.007	0.016	---	---	1/quarter
Hexachlorobutadiene	0.60	1.61	---	---	1/year
Hexachloroethane	0.83	3.36	---	---	1/year
Naphthalene	0.08	0.20	---	---	1/year
Nitrobenzene	9.46	27.06	---	---	1/year
Phenanthrene	0.08	0.20	---	---	1/year
Pyrene	0.08	0.20	---	---	1/year
1,2,4-Trichlorobenzene	0.83	3.36	---	---	1/year

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(\*) Water Quality Based Effluent Limitation

Calculations are found at Appendix A-1 and associated appendices. See below for site-specific considerations.

Site-Specific Consideration(s) for Outfall 001

CertainTeed Corporation's discharges are routed through the PPG Industries Canal for discharge. Due to recent rerouting of the PPG Industries Canal (LA0000761), CertainTeed Corporation's discharges no longer go to Bayou D'Inde under Subsegment 030901. Instead, they are routed to the Calcasieu River under Subsegment 030301.

Flow - this requirement has been established in accordance with LAC 33:IX.2707.I.1.b. and retained from the current LPDES permit effective on September 1, 2002. The continuous monitoring frequency has also been retained.

pH - this requirement has been established in accordance with LAC 33:IX.1113.C.1. and retained from the current LPDES permit effective on September 1, 2002. The 1/week monitoring frequency has also been retained.

BOD<sub>5</sub> and TSS - monthly average and daily maximum limitations have been established in accordance with OCPSF Guidelines under 40 CFR 414, Subpart D with a process wastewater flow of 0.50688 MGD. Additionally, allocations have been granted for sanitary, miscellaneous, and utility wastewaters based on best professional judgment.

Sanitary allocations are applied to a flow of 0.0072 MGD from Internal Outfall 101 and based on a 30 mg/L monthly average concentration and 45 mg/L daily maximum concentration for BOD<sub>5</sub> and TSS. Miscellaneous wastewater allocations are applied to a flow of 3.83472 MGD and based on a 0.1 fraction of the OCPSF concentrations (2.4 mg/L monthly average and 6.4 mg/L daily maximum) for BOD<sub>5</sub> and a 1.0 fraction of the OCPSF concentrations (40 mg/L monthly average and 130 mg/L daily maximum) for TSS. This methodology is consistent with the current LPDES permit, effective on September 1, 2002 as outlined in Section VIII.D of the March 13, 2002 Fact Sheet and Rationale. Utility wastewater allocations are applied to a flow of 0.30672 MGD and based on a 0.1 fraction of the OCPSF concentrations (2.4 mg/L monthly average and 6.4 mg/L daily maximum, 4 mg/L monthly average and 13 mg/L daily maximum) for BOD<sub>5</sub> and TSS, respectively. This methodology is consistent with a previous permit effective October 1, 1996 and carried forward to the current LPDES permit. The monitoring frequency for BOD<sub>5</sub> and TSS has been retained at (1/month and 1/week respectively) from the current LPDES permit.

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Please note that current Office guidance requires 1/week or more frequent monitoring for BOD<sub>5</sub> on process discharges from a major facility. However, since a 1/month monitoring frequency was previously established for BOD<sub>5</sub> and the compliance review did not indicate any BOD<sub>5</sub> excursions and/or open enforcement actions, no changes will be made to the frequency in this permit. Be advised that this frequency could increase to 1/week or more frequent in future permit issuances.

Total Copper, Total Mercury, Benzo(a)anthracene, and Benzo(a)pyrene - loadings have been established at this outfall per the Upper Calcasieu Estuary TMDL, issued in the Federal Register on June 13, 2002. A monitoring frequency of 1/quarter has been established based on the sampling requirements also established in the TMDL. See TMDL discussion in Part IX, Section C of this Fact Sheet and Rationale.

Vinyl Chloride - limitations established in accordance with OCPSF Guidelines under 40 CFR 414, Subpart J for direct discharge point sources that do not use end-of-pipe biological treatment. A monitoring frequency of 1/quarter has been retained from the current LPDES permit effective on September 1, 2002.

Hexachlorobenzene - monthly average and daily maximum limitations have been established to ensure compliance the OCPSF Guidelines under 40 CFR Part 414, Subpart J. Additionally, water quality based effluent limitations were established using guidance procedures presented in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, April 16, 2008. The monitoring frequency has been increased from 1/year to 1/quarter due to an EPA, Region VI recommendation for quarterly monitoring (at a minimum) on all water quality based effluent limitations.

Acrylonitrile, Benzene, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, 1,2-Dichloropropane, 1,3-Dichloropropylene, Ethylbenzene, Methyl Chloride, Methylene Chloride, Tetrachloroethylene, Toluene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, 2,4-Dimethylphenol, 4,6-Dinitro-o-cresol, 2,4-Dinitrophenol, 2-Nitrophenol, 4-Nitrophenol, Phenol, Acenaphthene, Acenaphthylene, Anthracene, 3,4-Benzofluoranthene, Benzo(k)fluoranthene, Bis(2-ethylhexyl)phthalate, Chrysene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Fluoranthene, Fluorene, Hexachlorobutadiene, Hexachloroethane, Naphthalene, Nitrobenzene, Phenanthrene, Pyrene, 1,2,4-Trichlorobenzene - limitations established in accordance with OCPSF Guidelines under 40 CFR 414, Subpart J for direct discharge point sources that do not use end-of-pipe biological treatment. A monitoring frequency of 1/year has been retained from the current LPDES permit effective on September 1,

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2002. This frequency is appropriate since these pollutants are not expected to be on site.

\*Internal Outfall 101 - the intermittent discharge of treated sanitary wastewater.

Sanitary wastewater that is included as a part of the process wastewater stream receive BPJ allocations for BOD<sub>5</sub> and TSS loading(s) to the process wastewaters at Appendix A-1.

Sanitary wastewaters (internal or external) are regulated in accordance with LAC 33:IX.711 or 709.B, by BPJ utilizing the sanitary general permits issued by this Office, and the Louisiana Water Quality Management Plan, Areawide Sanitary Effluent Limits Policy and Statewide Sanitary Effluent Limits Policy, as applicable.

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Flow, MGD	Report	Report	---	---	1/week
Fecal Coliform colonies/100ml	---	---	200	400	1/week

Site-Specific Consideration(s) for Internal Outfall 101

Flow - this requirement has been established in accordance with LAC 33:IX.2707.I.1.b. The flow shall be estimated 1/week based on Best Professional Judgment (BPJ).

Fecal Coliform - the limitations have been retained from the current LPDES permit, effective on September 1, 2002 and are consistent with the Class II General Permit, LAG540000. However, the statistical basis of the 400 colonies/100 ml limitation has been changed from a weekly average to a daily maximum based on best professional judgment and current guidance. The monitoring frequency has been increased from 2/month to 1/week based on multiple excursions reported from December 2007 through January 2009.

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2. Outfall 003 - Stormwater

\*Outfall 003 - the intermittent discharge of low contamination potential stormwater runoff.

Uncontaminated or low potential contaminated stormwater discharged through discrete outfall(s) not associated with process wastewater shall receive the following BPJ limitations in accordance with this Office's guidance on stormwater, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6).

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Flow, MGD	- Report	Report	---	---	1/month
TOC	---	---	---	50	1/month
Oil & Grease	---	---	---	15	1/month
pH Standard Units	---	---	6.0 (min)	9.0 (max)	1/quarter

Site-Specific Consideration(s) for Outfall 003

Flow - this requirement has been established in accordance with LAC 33:IX.2707.I.1.b. The monitoring frequency of 1/month has been retained from the current LPDES permit, effective on September 1, 2002.

TOC and Oil & Grease - these daily maximum limitations have been retained from the current LPDES permit, effective on September 1, 2002 and are consistent with the limitations established in the Multi-Sector General Permit for Industrial Stormwater Discharges, LAR050000 and this Office's guidance on stormwater, as determined in the letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6). The monitoring frequency of 1/month has also been retained from the current LPDES permit.

pH - this requirement has been established in accordance with LAC 33:IX.1113.C.1. and retained from the current LPDES permit effective on September 1, 2002. The 1/quarter monitoring frequency has also been retained from the current LPDES permit.

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Additional Requirement for all Stormwater

In accordance with LAC 33:IX.2707.I.3 and 4 [40 CFR 122.44(I)(3) and (4)], a Part II condition is proposed for applicability to all storm water discharges from the facility, either through permitted outfalls or through outfalls which are not listed in the permit or as sheet flow. For first time permit issuance, the Part II condition requires a Storm Water Pollution Prevention Plan (SWP3) within six (6) months of the effective date of the final permit. For renewal permit issuance, the Part II condition requires that the Storm Water Pollution Prevention Plan (SWP3) be reviewed and updated, if necessary, within six (6) months of the effective date of the final permit. If the permittee maintains other plans that contain duplicative information, those plans could be incorporated by reference to the SWP3. Examples of these type plans include, but are not limited to: Spill Prevention Control and Countermeasures Plan (SPCC), Best Management Plan (BMP), Response Plans, etc. The conditions will be found in the draft permit. Including Best Management Practice (BMP) controls in the form of a SWP3 is consistent with other LPDES and EPA permits regulating similar discharges of stormwater associated with industrial activity, as defined in LAC 33:IX.2522.B.14 [40 CFR 122.26(b)(14)].

C. WATER QUALITY-BASED EFFLUENT LIMITATIONS

Technology-based effluent limitations and/or specific analytical results from the permittee's application were screened against state water quality numerical standard based limits by following guidance procedures established in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, April 16, 2008. Calculations, results, and documentation are given in Appendix B.

In accordance with LAC 33:IX.2707.D.1/40 CFR § 122.44(d)(1), the existing (or potential) discharge (s) was evaluated in accordance with the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, April 16, 2008, to determine whether pollutants would be discharged "at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard." Calculations, results, and documentation are given in Appendix B.



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The following pollutants received water quality based effluent limits:

POLLUTANT(S)
Total Copper
Total Mercury
Hexachlorobenzene

Minimum quantification levels (MQL's) for state water quality numerical standards-based effluent limitations are set at the values listed in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, April 16, 2008. They are also listed in Part II of the permit.

To demonstrate compliance with the waste load allocations (WLAs) established in the Calcasieu Estuary TMDL for Toxics, in addition to protecting against the potential for discharges of the TMDL pollutants, total copper, total mercury, benzo(a)anthracene, and benzo(a)pyrene were present at levels above that of state water quality standards. For discharges of total copper, total mercury, benzo(a)anthracene, and benzo(a)pyrene at levels exceeding state water quality standards, site specific MQL's were developed. They are also listed in Part II of the permit.

#### TMDL Waterbodies

A neighboring facility, PPG Industries (LA0000761), has proposed to remediate the lower PPG Canal (a.k.a. PPG Silicas Ditch) and portions of Bayou D'Inde. As a result of the remediation activities, PPG Industries relocated their Outfall 001 from Bayou D'Inde to the Calcasieu River in March 2009. This is pertinent to CertainTeed Corporation since all wastewaters from this facility are discharged into the PPG Canal for discharge directly to the Calcasieu River. Therefore, the Subsegment for this facility has changed from 030901 to 030301.

The discharges from CertainTeed include process wastewater and process area stormwater from the thermal oxidizers, process drains, and railcar sumps; utility wastewater including cooling tower blowdown, boiler blowdown, conveyor blower air cooling water, and air compressor condensate drain wastewater; non process area stormwater; water well overflow; and sanitary wastewater from Internal Outfall 101 (Outfall 001) and low contamination potential stormwater runoff (Outfall 003) to the PPG Silica Pigments Ditch, thence to the Calcasieu River, Segment No. 030301. Subsegment 030301 was not listed on the Final Integrated list of impairments due to the Upper Calcasieu Estuary Toxics TMDL being issued June 13, 2002.

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This TMDL addressed Ammonia (as N), Copper, Mercury, Benzo(a)anthracene, and Benzo(a)pyrene.

Ammonia (as N)

The TMDL for Toxics for the Calcasieu Estuary was finalized on June 13, 2002, addressing the presence of toxic substances, including Ammonia (as N) in the watershed. The TMDL did not assign loadings to the facilities through this TMDL. However, it did require retention of limitations at existing levels if the current LPDES permit already included a limitation. The current LPDES permit issued to CertainTeed Corporation effective on September 1, 2002 did not include an Ammonia (as N) limitation, therefore, no additional requirements were added to this permit.

Copper and Mercury

Outfall 001 - The Upper Calcasieu Estuary TMDL at Subsegment 030301 did not include Waste Load Allocations (WLAs) for CertainTeed Corporation since the discharges have historically gone into Bayou D'Inde at Subsegment 030901. Since CertainTeed was not assigned allocations as part of the existing TMDL, LDEQ has determined that it is appropriate to apply the WLAs assigned in the Bayou D'Inde TMDL for Outfall 001 based on the following:

1. CertainTeed Corporation discharges are routed through the PPG Industries Silicas Ditch. Until the move of the discharge location in March 2009, PPG was historically the last facility contributing wastewaters to Bayou D'Inde prior to mixing with the waters of the Calcasieu River, about 1,200 feet downstream.
2. The WLAs used in the Bayou D'Inde TMDL were included in the overall model of the Upper Calcasieu Estuary TMDL for Subsegment 030301.

Based on both factors listed above, the LDEQ has determined the proximity of the new PPG Canal discharge location is similar to the location used during TMDL development. Therefore, the overall loadings of Total Copper and Total Mercury in the Calcasieu River are not reasonably expected to change.

Outfall 003 - CertainTeed performed sampling and presented data to LDEQ in a document dated April 8, 2009 and titled *Investigation of Trace Metals in Storm Water Discharges at Outfall 003*, prepared by C-K Associated, LLC.

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The following results were reported:

Sample Identification	Total Copper (µg/L)	Total Mercury (ng/L)
Field Blank	<0.01	<0.08
Upstream	5.22	8.49
Outfall 003	4.11	8.56
Outfall 003 Duplicate	3.88	7.75

The site-specific minimum quantification level (MQL) listed in Part II.H of the permit for Total Copper is 9.14 µg/L and 0.06 µg/L or 60.0 ng/L for Total Mercury. In accordance with the results listed above, both parameters were present at levels well below their respective site-specific MQLs. LDEQ has determined that Total Copper and Total Mercury are not reasonably expected to cause or contribute to further impairments in the Calcasieu River. Therefore, reporting requirements were not established for these parameters at this outfall.

Benzo(a)anthracene, and Benzo(a)pyrene

Outfall 001 - The Upper Calcasieu Estuary TMDL at Subsegment 030301 did not include Waste Load Allocations (WLAs) for CertainTeed Corporation since the discharges have historically gone into Bayou D'Inde at Subsegment 030901. Since CertainTeed was not assigned allocations as part of the existing TMDL, limitations have been established using a portion of the Margin Of Safety (MOS) in Subsegment 030301 for Outfall 001. Therefore, the methodology for establishing limitations to address the impairments under Subsegment 030301 is discussed below.

1. The TMDL included monthly average limitations only for all facilities assigned WLAs. Therefore, a monthly average loading has been established based on the monthly average concentrations for Benzo(a)anthracene and Benzo(a)pyrene in the OCPSF Guidelines at 40 CFR 414, Subpart J.
2. The current MOS for these parameters is 0.2375 lbs/day. The MOS listed in the TMDL was 0.475 lbs/day, but 50% of the MOS was previously assigned to PPG Industries under LA0000761 to accommodate the remediation of Bayou D'Inde and ultimate canal reroute to the Calcasieu River, leaving 0.2375 lbs/day remaining for other facilities and/or future growth. Calculation of technology based effluent limitations for these parameters yields monthly average limitations of 0.08 lbs/day, which is well below the existing MOS loadings. Therefore, LDEQ

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has established monthly average limitations of 0.08 lbs/day for Benzo(a)anthracene and Benzo(a)pyrene leaving 0.1575 lbs/day in the MOS for other facilities and/or future growth. This determination was based on Best Professional Judgment (BPJ).

Outfall 003 - these pollutants are typically associated with process wastewaters, therefore are not reasonably expected to be present in discharges containing low contamination potential stormwater runoff. Therefore, no additional requirements were added to this outfall.

Monitoring frequencies for water quality based limited parameters are established in accordance with the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, April 16, 2008, EPA Region VI recommendations, and as established in the TMDL.

D. Biomonitoring Requirements

It has been determined that there may be pollutants present in the effluent which may have the potential to cause toxic conditions in the receiving stream. The State of Louisiana has established a narrative criteria which states, "toxic substances shall not be present in quantities that alone or in combination will be toxic to plant or animal life." The Office of Environmental Services requires the use of the most recent EPA biomonitoring protocols.

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates both the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. The biomonitoring procedures stipulated as a condition of this permit for Outfall(s) 001 are as follows:

<u>TOXICITY TESTS</u>	<u>FREQUENCY</u>
Chronic static renewal 7-day survival and growth test using <u>Mysidopsis bahia</u> [Method 1007.0]	1/quarter
Chronic static renewal 7-day larval survival and growth test using inland silverside minnow ( <u>Menidia beryllina</u> ) [Method 1006.0]	1/quarter

Toxicity tests shall be performed in accordance with protocols described in the latest revision of the "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms." The stipulated test species are

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appropriate to measure the toxicity of the effluent consistent with the requirements of the State water quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge in accordance with regulations promulgated at LAC 33:IX.2715/40 CFR Part 122.48.

Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen, conductivity, and salinity shall be documented in a full report according to the test method publication mentioned in the previous paragraph. The permittee shall submit a copy of the first full report to the Office of Environmental Compliance. The full report and subsequent reports are to be retained for three (3) years following the provisions of Part III.C.3 of this permit. The permit requires the submission of certain toxicity testing information as an attachment to the Discharge Monitoring Report.

This permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body. Modification or revocation of the permit is subject to the provisions of LAC 33:IX.3105/40 CFR 124.5. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act.

Dilution Series

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 0.56%, 0.75%, 0.99%, 1.3%, and 1.8%. The low-flow effluent concentration (critical dilution) is defined as 1.3% effluent.

X. Compliance History/DMR Review:

A compliance history DMR review was completed covering January 1, 2007 through April 2009.

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A. DMR Excursions Reported

DATE	PARAMETER	OUTFALL	REPORTED VALUE		PERMIT LIMITS	
			MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM
12/31/07	Fecal Coliform	101	775 colonies /100 ml	>60,000 colonies /100 ml	200 colonies /100 ml	400 colonies /100 ml
06/30/08	Fecal Coliform	101	---	>3,000 colonies /100 ml	---	400 colonies /100 ml
08/31/08	Fecal Coliform	101	---	>3,000 colonies /100 ml	---	400 colonies /100 ml
10/31/08	pH	001	---	9.7 s.u.	---	9.0 s.u.
11/30/08	Fecal Coliform	101	>3,000 colonies /100 ml	>3,000 colonies /100 ml	200 colonies /100 ml	400 colonies /100 ml
01/01/09	Fecal Coliform	101	>3,647 colonies /100 ml	>6,800 colonies /100 ml	200 colonies /100 ml	400 colonies /100 ml

B. Inspections - A Compliance Evaluation Inspection (CEI) was completed on July 6, 2007. The following observations were noted by the inspector:

1. There were two excursions reported on the DMRs between July 2006 and June 2007 (pH and Fecal Coliform).
2. No areas of concern.

C. Compliance History - No Open Orders.

XI. "IT" Questions - Applicant's Responses

The "IT" Questions along with the applicant's responses can be found in the Permit Application dated March 8, 2007.

XII. Endangered Species:

The receiving waterbody, Subsegment 030301 of the Calcasieu River Basin is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U.S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated November 17, 2008 from

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Rieck (FWS) to Nolan (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. Therefore, the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat.

XIII. Historic Sites:

The discharge is from an existing facility location, which does not include an expansion on undisturbed soils. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the "Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits" no consultation with the Louisiana State Historic Preservation Officer is required.

XIV. Tentative Determination:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to reissue a permit for the discharge described in the application.

XV. Variances:

No requests for variances have been received by this Office.

XVI. Public Notices:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the fact sheet. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List